

GSFC's Earth Sciences (GES)
Distributed Active Archive Center (DAAC)
Status on Archive & Distribution of MODIS Data

Presentation to MODIS Science Team

May 4, 1999

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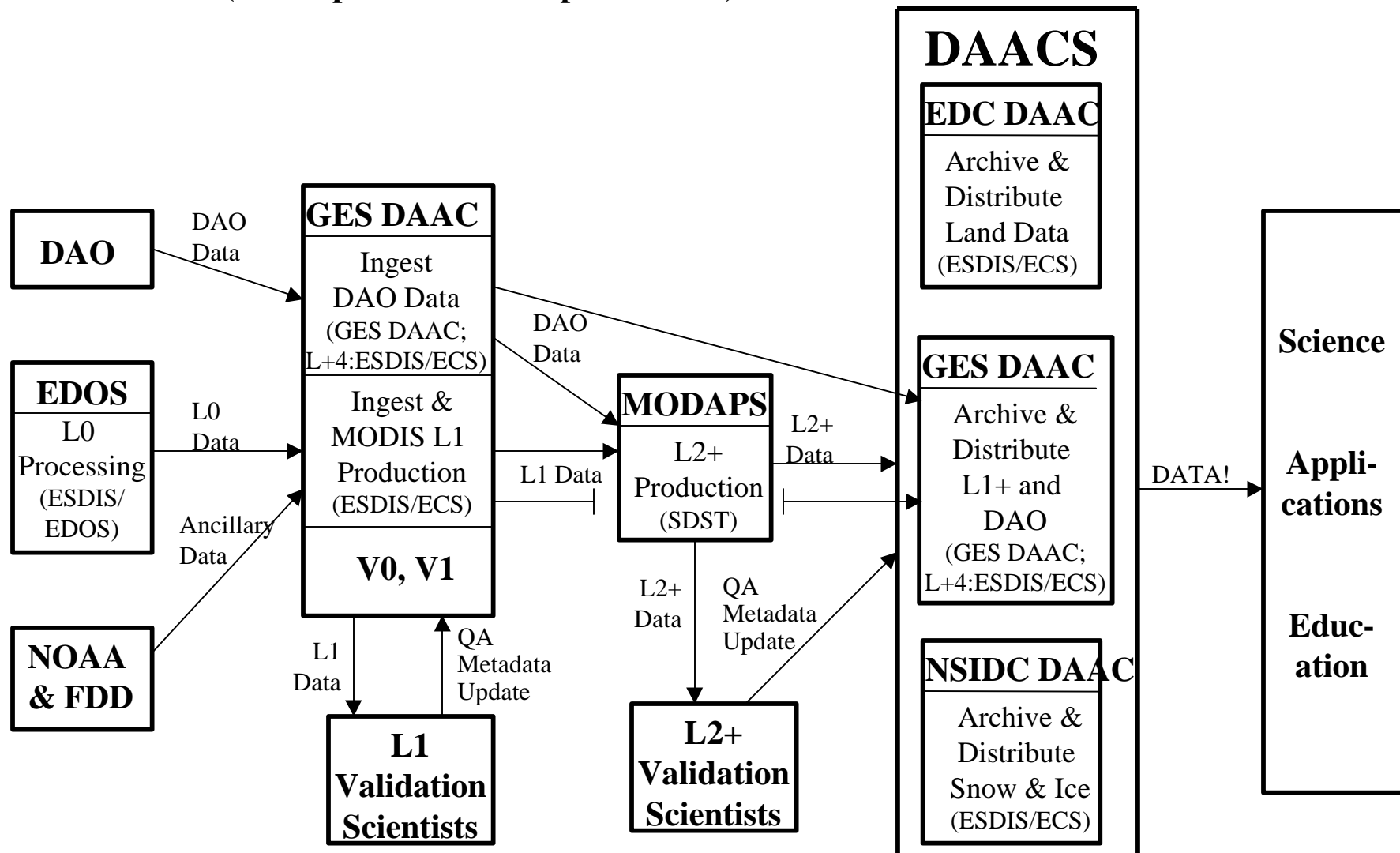
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<http://daac.gsfc.nasa.gov>

At Launch MODIS Data Flow

(Development Team in parenthesis)



Operations Status: Operational Readiness Exercises (OREs)

- Tracking progress via ~59 GES DAAC Launch Critical Capabilities: Functionality and Performance
 - Red - Not yet demonstrated on 4PY at GDAAC in any mode
 - Yellow - Demonstrated at GDAAC on 4PY but in a mode other than Ops or a version not currently installed in Ops
 - Green - Demonstrated at GDAAC in Ops Mode on the most recent version of 4PY
- | Status: | Functionality | Performance |
|---------|-----------------------|-------------|
| – 4/13 | ~ 8 Green, 9 Yellow | All Red |
| – 4/20 | ~ 15 Green, 15 Yellow | All Red |
| – 5/3 | ~ 32 Green, 18 Yellow | All Red |
- Moving on:
 - Work through OREs until all Green
 - Work off problems with ESDIS/ECS: Install patches, real time
 - Work any performance issues
 - Keep pushing the system with more and more data: Push interfaces for functionality and performance; Get into routine operations

Operations Status of GDAAC Launch-Critical Capabilities

Activity	Functionality Demonstrated	Performance Demonstrated	ORE	Comments
Ingest: MODIS L0 data	Yes	No	1	Using MOD000
MODIS Expedited data	No	No	21	problem; TT 1020
Aster Expedited data	Yes	No	22	
EDOS s/c ancillary data	Maybe	No	36	All but APID05 - not received
FDD attitude data	Yes	No	2	
(Larry) NCEP Final Analysis (GDAS_0ZF)	No	No	2	NCR 18417; our format bad
(Larry) TOVS Column Ozone Daily Product (OZ_DA	Maybe	No	2	TT 1095
(Larry) EP-TOMS Column ozone (OZONEEP)	Maybe	No	2	Set-up, but not fully checked
(Larry) Reynolds weekly SST (REYNSST)	Yes	No	2	
(Larry) NCEP 0.5 degree Ice Concentration (SEA_I	Yes	No	2	
(Larry) FNMOC Ocean Mixed Layer Depth (FNMOC	Yes	No	2	
Archive: MODIS L0 data	Yes	No	1	MOD000 used
FDD attitude data	Yes	No	2	
(Larry) NCEP Final Analysis (GDAS_0ZF)	No	No	2	NCR 18417
(Larry) TOVS Column Ozone Daily Product	Maybe	No	2	ingest not reliable
(Larry) EP-TOMS Column ozone	Maybe	No	2	Set-up, but not fully checked
(Larry) Reynolds weekly SST	Yes	No	2	
(Larry) NCEP 0.5 degree Ice Concentration	Yes	No	2	
(Larry) FNMOC Ocean Mixed Layer Depth	Yes	No	2	
DPREP output	Maybe	No	36	Not at-launch version
MODIS L1A	Yes	No	3	
MODIS Geolocation	Yes	No	3	
MODIS L1B	Yes	No	6	
MODIS Cloud Mask	Yes	No	9	
MODIS Atmospheric Profiles	Yes	No	9	
MODIS Volcano Alert	Yes	No	9	
Produce: DPREP of APID 4 and FDD data	Maybe	No	36,38	Not at-launch version
MODIS L1A	Yes	No	3	Instrum. Activation data used
MODIS Geolocation	Yes	No	3	Instrum. Activation data used
MODIS L1B	Yes	No	6	
MODIS L1B Subsets for LaTIS	No	No	34	PGE not ready yet
MODIS Cld Mask, Atm Profiles, Volc Alert	Maybe	No	9	Requires GDAS; bad format
Distribute: DPREP Output to MODAPS	Yes	No		
Geolocation to MODAPS	Yes	No		
MODIS L1B to MODAPS	Yes	No	7	

Operations Status of GDAAC Launch-Critical Capabilities

Activity	Functionality Demonstrated	Performance Demonstrated	ORE	Comments
MODIS Cloud Mask to MODAPS	Maybe	No	9.5	
Atmospheric Profile to MODAPS	Maybe	No		
Ancillary data to MODAPS	Maybe	No	7	Sent 2 of 6 types
Subsetted MODIS L1B to LaTIS	Maybe	No	34	Sent sample; proved data link
APID 4 to LDAAC	Maybe	No	34	Need EDOS to correct name
MODIS L1A for science QA	Yes	No	4	
MODIS Geolocation for science QA	Yes	No	4	
MODIS L1B for science QA	No	No	7	have not test ops procedures
MODIS Cloud Mask for science QA	Yes	No	9.5	
MODIS Atmospheric Profiles for science QA	Yes	No	10	
MODIS Volcano Alert for science QA	Maybe	No	10	
MODIS Expedited Data to MCST	Maybe	No	21	MOD00X
ASTER Expedited Data to ASTER GDS	Yes	No	22	
ASTER Expedited Data to EDC	Yes	No	22	
Subscriptions to users	Yes	No	16,17	
Ad-hoc Requests to users	No	No	11,12,17	
Interoperate with V0; Valids, Search & Order	Maybe	No	33	S&O from GDAAC successful
Update Metadata:				
MODIS L1A	No	No	5	Not QA-able?
MODIS Geolocation	Maybe	No	5	
MODIS L1B	Maybe	No	8	
MODIS Cloud Mask	Yes	No	10	
MODIS Atmospheric Profiles	Yes	No	10	
MODIS Volcano Alert	No	No	10	Not QA-able?
Update PGEs:				
Any PGE in Production	No	No	14,15,19,20	Procedure not tested in Ops

Key:

Yes	Demonstrated at GDAAC in Ops Mode on the most recent version of 4PY
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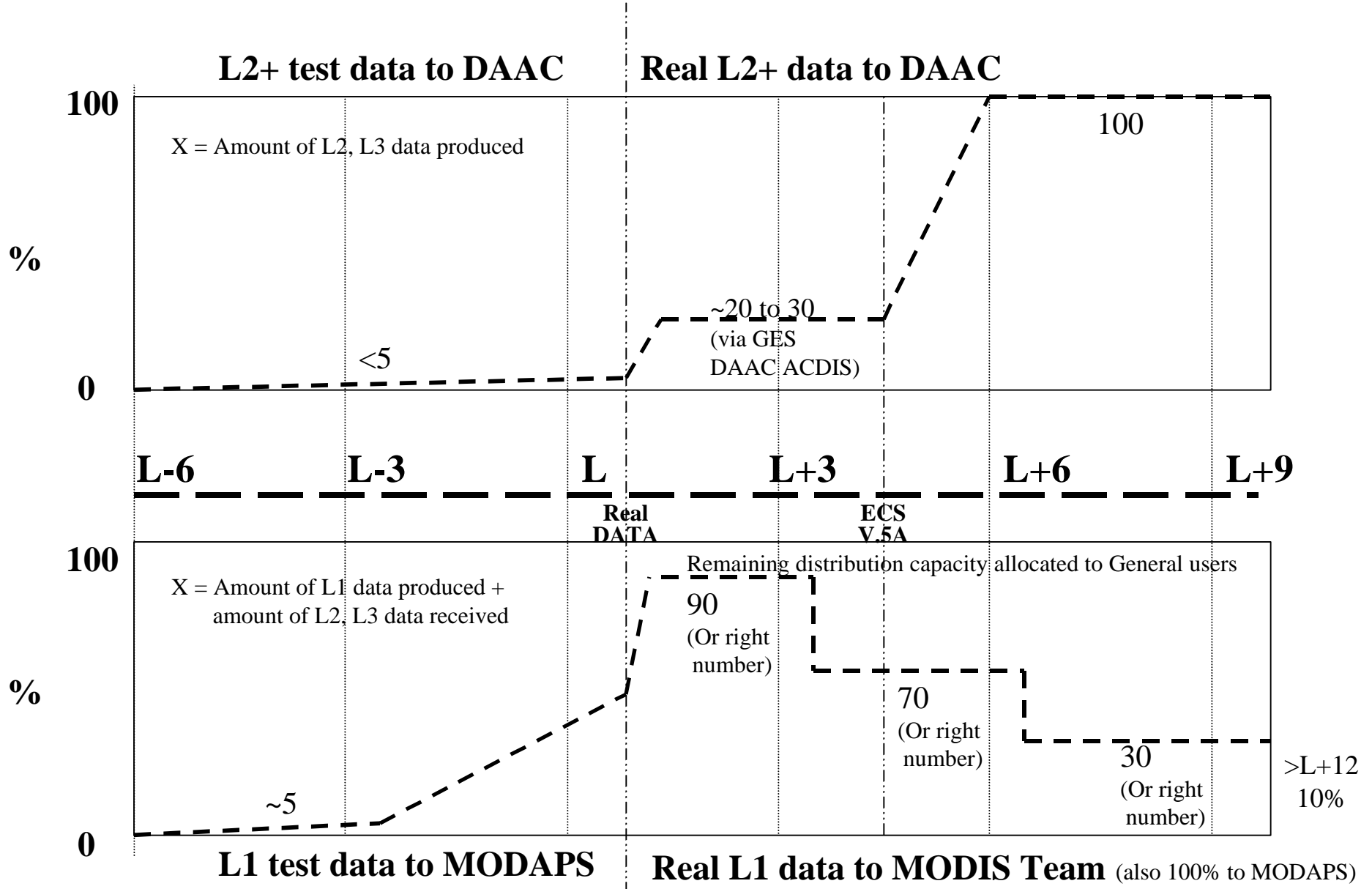
GES DAAC User Services

- MODIS Data Support Team
 - Lead: Greg Leptoukh 301-614-5253
 - Discipline specific science trained data specialists
- Help Desk
 - 301-614-5224
 - daacuso@daac.gsfc.nasa.gov
 - <http://daac.gsfc.nasa.gov>
- Outreach
 - Conferences
 - Literature
 - CDs

Archive & Distribution Biggest Concern: Distribution Capacity

- Current Situation:
 - System is sized to distribute all data archived once (aka 1X Distribution)
 - SeaWiFs Distribution is 8X its Data Archive
 - We do not really know the magnitude of the concern, until performance testing has occurred (but we know there is a concern)
- Mitigation:
 - Implement on-demand subsetting (DAAC unique extension)
 - Implement a second high bandwidth network and additional distribution drives (DAAC unique extension)
 - Implement browse data products so that users can then order specific data
 - Established the MODIS Data Support Team (**Lead: Greg Leptoukh- 301-614-5253**), with discipline specific science data specialists, to facilitate reducing unknowing science, application, and education data distribution drains
 - Distribute the right, higher amount of data to the science team in the first six months after launch (through Activation & Evaluation) to validate data quicker (Reduces redistribution later.) This amount is greater than the current data distribution policy of 10% of total distribution, to the science team for QA

MODIS DATA DISTRIBUTION PHASING (% of 1X)



KEY ASSUMPTIONS: SUBSETTING AND COMPRESSION APPLIED